View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by CORE

Wright State University

CORE Scholar

Undergraduate Curriculum and Academic Policy Committee Minutes

Undergraduate Curriculum and Academic Policy Committee

11-9-2005

Undergraduate Curriculum and Academic Policy Committee Minutes, November 9, 2005

Follow this and additional works at: https://corescholar.libraries.wright.edu/archives_ucapc_minutes

 Part of the Educational Leadership Commons

Repository Citation

(2005). Undergraduate Curriculum and Academic Policy Committee Minutes, November 9, 2005. .
https://corescholar.libraries.wright.edu/archives_ucapc_minutes/82

This Minutes is brought to you for free and open access by the Undergraduate Curriculum and Academic Policy Committee at CORE Scholar. It has been accepted for inclusion in Undergraduate Curriculum and Academic Policy Committee Minutes by an authorized administrator of CORE Scholar. For more information, please contact library-corescholar@wright.edu.

Undergraduate Curriculum and Academic Policy Committee

Minutes of November 9, 2005 Meeting

Present: Candace Cherrington, Jeanne Fraker, Krystal Karshner, Nathan Klingbeil, Charles Larkowski, Joe Law, KT Mechlin, David Percy, Bobbie Pohlman, Tom Sav, Carol Wagner-Williams, Karen Wilhoit. Guests: Joyce Hail (Registrar's Office).

Approved Minutes of October 19, 2005.

UCAPC Subcommittee Reports

Writing Across the Curriculum Committee (WAC) -- Joe Law, Chair, reported that the committee met on Friday, November 4, and discussed plans for developing a means of recognizing faculty excellence in teaching writing intensive courses and excellence in student work in writing intensive courses.

University General Education Committee (UGEC) -- Susan Carrafiello, Chair, forwarded the committee report per the following minutes

UGEC Minutes, October 20, 2005

Undergraduate Academic Program Review Committee (UAPRC) -- Rudy Fichtenbaum, Chair, forwarded the committee report indicating that a slight change in the review schedule has been approved, viz., the Art programs scheduled for review in 2006-07 and the Music programs scheduled for review in 2009-10 have been switched.The current 2005-06 review remains unchanged. The revisions are incorporated into the complete program review schedule available at the

UAPRC Website

Course Inventory and Modification Requests

CECS

Approved Inventories: EE 440*, ISE 478
Approved Modifications: BME 439, BME 462, BME 463, BME 460, ISE 472*, ISE 473, ISE 474

* the committee made minor corrections to the proposals

CEHS

Approved Modifications: HPR 330

COSM

Approved Inventories:

Delete: BIO 307, BIO 310, BIO 350, BIO 351**,** BIO 410, BIO 430, BIO 451, BIO 471, ENV 101, ENV 111, ENV 112, ENV 113, ENV 122, ENV 123, ENV 124, ENV 211, ENV 212, ENV 213, ENV 214, ENV 215, ENV 222, ENV 411, ENV 412, ENV 413
Inactivate: BIO 306, BIO 308, BIO 412, BIO 413, BIO 425, BIO 429, BIO 480, BIO 481
Approved Modifications: BIO 111, BIO 119, BIO 213*, BIO 230, BIO 231, BIO 306, BIO 313, BIO 314, BIO 315, BIO 316, BIO 380, BIO 404, BIO 407, BIO 421, BIO 444, BIO 452, BIO 470, BIO 476, PHY 440*
* the committee made minor corrections/additions to the proposals

LC
Approved Modifications: TFI 205, TAC 220, TMG 210, TMG 270

Program Changes

CECS
Approved
B.S. Industrial and Systems Engineering

COSM
Approved
B.S. Biological Sciences (Exercise Biology Option)
B.S. Mathematics (Pure Mathematics Concentration)
B.S. Mathematics (Applied Mathematics Concentration)
B.S. Mathematics (Computing Concentration)
B.S. Mathematics (Statistics Concentration)
B.A. Mathematics
Dual Degree B.S. and B.A. Mathematics
Minor is Mathematics and Minor in Statistics

New Programs

COSM
Approved
B.S. Statistics

Academic Policy

At the meeting it was brought to the attention of UCAPC that the Registrar's Office has been implementing department and college Course Modification Requests during the quarter in progress. For example, when the Registrar's Office has received a Course Modification Request effective Fall 2005 for a course credit hour increase, a course credit hour decrease, or for a lab fee increase after the Fall 2005 registration start or after the Fall 2005 term was in progress, the change was implemented and students enrolled in the course were thereby affected by the change. As a result, the university assessed students according to the changes and in some cases students were or could have been charged higher fees, experienced reduced financial aid, or negatively affected by their veteran's benefits. While administratively this was reported as going on for decades, the Faculty Senate or UCAPC has never been appraised of such until the current meeting. On this front, UCAPC has for many years regularly received such Course Modifications Requests that are outdated in the sense that they were initially launched at the

department level three, six, and even twelve months prior to approval by that department's college curriculum committee and forwarded to UCAPC by the college dean. For sure, observed college curriculum wheels turn slowly and that, in and of itself, need not be a problem in all cases for some curriculum decisions require careful review and consideration. Yet, college deans need to be more aware and in tune to the curriculum processes in the colleges and at the university level. Other than that, to correct the problem at hand, UCAPC drafted the policy below for consideration by the Faculty Senate. The policy proposal currently stands as a ***ROUGH DRAFT*** for consideration by the Faculty Senate and will be further reviewed and possibly changed by UCAPC at its January 11 meeting. Any feedback regarding such by the Faculty Senate via Senator constituencies would, of course, be welcomed.

Course Modification Implementation Policy (herein the revised & finalized version by UCAPC, January 11, 2006)

Adjourned: Next meeting January 11 and Winter Quarter Meetings and other Schedules as follows:

UCAPC Meeting	UCAPC Submission Deadline (No Exceptions: receipt after forwards to the next meeting)	Faculty Senate Meeting New Business	Faculty Senate Meeting Old Business
Current Meeting November 9		January 9	February 6
January 11, 2:15 p.m.	December 21, 12:00 Noon	February 6	March 6
February 8, 2:15 p.m.	January 27, 12:00 Noon	March 6	April 3
March 8, 2:15 p.m.	February 24, 12:00 Noon	April 3	May 1
April TBA	TBA	May 1	June 5
May TBA	TBA	June 5	Fall 2006

UCAPC HOME

University General Education Committee Meeting, October 20, 2005, 10:00 a.m.

Present: Candy Cherrington (CoNH), Mindy Diesslin (CoSM), , Jeanne Fraker (UVC), Lillie Howard (Provost's office), Joe Law (WAC), Mary Kenton (Honors), Susan Carrafiello (CoLA, Chair)

1. Minutes from September 29, 2005, were approved.

2. The chair distributed a proposed timeline for implementation of GE Area I-VI plans.

3. Joe Law distributed a summary of the spring 2005 GE student learning outcomes evaluations. The committee was asked to review the data and prepare comments for the next meeting. Some discussion emerged regarding the administration of the forms, particularly in regard to Area VI classes. The committee will review the administration schedule at the next meeting to determine if all Area VI classes are using the evaluation form. It was also noted that questions 3 and 9 on the Area III form are identical. The committee recommended that question 9 simply be eliminated on the form during the next printing.

4. The revised Ohio Transfer Module Guidelines were distributed. The chair noted that UCAPC has requested UGEC review and comment on the proposed guidelines. The committee agreed it was important to obtain feedback of GE faculty regarding the proposed transfer module guideline revisions. The chair will send a memo to the appropriate deans and request such feedback by November.

During the discussion of the revised guidelines, it was noted that some current GE courses were not approved for the transfer module. The committee was urged to consider if the revised guidelines justify resubmitting these GE courses for the transfer module.

5. The meeting adjourned at 11:00 am.

The next UGEC meeting will be on Thursday, November, 10, 10-11 am, in 248 University Hall.

College of Engineering and Computer Science
Bachelor of Science in Industrial and Systems Engineering

Old ISE		New ISE 2005-2006	
I. General Education Requirements*	**66**	**I. General Education Requirements***	**66**
Required Substitutions		Required Substitutions	
Area One	18	Area One	18
MTH 229, 230		MTH 229, 230	
Area Two	8	Area Two	8
Area Three	8	Area Three	8
Area Four	12	Area Four	12
Area Five	16	Area Five	16
PHY 240/200, 242/202, 244/204		PHY 240/200, 242/202, 244/204	
Area Six	4	Area Six	4
College Component: EGR 190**		College Component: EGR 190**	
*Courses taken to satisfy GE requirements may not be counted toward the major.		*Courses taken to satisfy GE requirements may not be counted toward the major.	
**For incoming freshmen only. Students with more than 45 credit hours are required to take ISE 210.		**For incoming freshmen only. Students with more than 45 credit hours are required to take ISE 210.	
II. Engineering Requirements	**92**	**II. Engineering Requirements**	**92**
Core Engineering Requirements		Core Engineering Requirements	
BME 428	4	BME 428 (Course is 3 CR, previously listed incorrectly)	3
EGR 101, 482	8	EGR 101	5
EE 301/302, 321	9	EE 301/302, 321	9
ME 212, 213, 315	12	ME 212, 213, 315	12
Major Courses		Major Courses	
ISE 195, 301, 302, 406, 407, 451, 465, 470, 471	**34**	ISE 195, 301, 302, 406, 407, 451, 470, 471, 477, 499	38
ISE 472, 473, 474, 481, 482, 483, 484	25	ISE 472, 473, 474, 481, 482, 483, 484	25
III. Related Course Requirements	**27**	**III. Related Course Requirements**	**24**
CHM 121	5	CHM 121	5
CEG 220	4	CEG 220	4
MTH 231, 232, 233*, 253*	18	MTH 231, 232, 235	15
IV. Technical Communications Requirement	**3**	**IV. Technical Communications Requirement**	**3**
EGR 335	3	EGR 335	3
V. Elective/Concentration Requirement	**8**	**V. Elective/Concentration Requirement**	**8**
ISE Honors Undergraduate Thesis Track:	8	ISE Honors Undergraduate Thesis Track:	8
ISE 499-9 and ISE 499-10		ISE 499-9 and ISE 499-10	
Human Integrated Systems Track:	8	Human Integrated Systems Track:	8
PSY 110 and ISE 431		Select two: ISE 431, ISE 465, and PSY 110	
Operations Management Track:	8	Operations Management Track:	8
MS 307 and MS 320		MS 307 and MS 320	
Minor in Operations Management available. See COBA		Minor in Operations Management available. See COBA	
Ergonomic Systems Track:	8	Ergonomic Systems Track:	8
BME 420 and ISE 480		BME 420 and ISE 480	
Computer Science Track:	8	Computer Science Track:	8
CS 240 and CS 241		Select two: ISE 465, CS 240 and CS 241	
Minor in CS for Engineers & Scientist available. See CS Dept for details.		Minor in CS for Engineers & Scientist available. See CS Dept for details.	
Computer Systems Tack:	8	(Computer Systems Track Removed)	
CEG 305 and CEG 330			
Materials Science and Engineering Track:	8	Materials Science and Engineering Track:	8
Select two: ME 220, ME 370, ME 371 and ME 472		Select two: ME 220, ME 370, ME 371 and ME 472	
Minor in Materials Science and Egr available. See ME Dept for details.		Minor in Materials Science and Egr available. See ME Dept for details.	
Total (minimum)	**196***	**Total**	**193**

***MTH 233 and MTH 253 will be replaced by a 4-5 credit hour integrated course yielding a required minimum total of 194-195 program credit hours.**

Department of Biological Sciences
3640 Colonel Glenn Hwy
Dayton, OH 45435-0001
(937) 775-2655
FAX (937) 775-3320

DATE: March 2, 2005
Updated: October 26, 2005 (memo changes in italics)
TO: Undergraduate Curriculum Committee
FROM: Roberta Pohlman, Ph.D.
Associate Professor, Department of Biological Sciences
SUBJECT: Justification for EXB course requirements *changes and deletions*

1.) ***ADD*** BIO/CLS 101 – Medical & Science Terminology
a.) This course is prerequisite for all physical therapy applicants.
b.) Pertinent to all fields in applied health and biology

2.) ***ADD*** P&B 301 and 302
a.) The EXB/BIO 452 instructor *(Exercise Pharmacology)* ~~is now requiring~~ *now requires* this basic human physiology course as a prerequisite for the course.
b.) There are only two human physiology courses on campus (BIO 111 and P&B *series*). Because our students work exclusively with "humans," it is paramount that they have as much background as possible in this area.
*c). **DELETE** - Because of this addition, BIO 278 and 279, Anatomy and Physiology I and II, will be omitted from the program.*

NOTE: ANT 201 and ANT 202, cadaver anatomy, with P&B 301 and P&B 302,human physiology, meet the expectations of the EXB program.

3.) **SUBSTITUTING** PSY 341, Lifespan Developmental Psychology, for EXB 321, Lifespan Motor Development.
a.) A "human development" course is prerequisite for physical therapy applicants.
b.) As our program is outlined currently, three nonclinical EXB courses, 300 level, parallel three clinical courses, 400 level, taught during the academic year.
FALL – EXB 353 and EXB 450
WINTER – EXB 354 and EXB 451
SPRING – EXB 352 and EXB 455
c.) EXB 321 has been a SPRING course for many years. By substituting PSY 341, taught every quarter, for EXB 321, students will have little trouble filling a human development requirement.

4.) The rationale in changing the life science is that each of these listed courses to choose from meets additional requirements for some professional program. By counting them as approved electives, the student will get credit for taking a course required as a prereq for a graduate program.

5.) The rationale of changing the requirements of PHR 340 or 410 or EXB 261 to EXB 452, the Exercise biology program needed a course with more information in cardiac drugs and the effects of exercise on the various classes and subclasses. The pharm class in the Medical School is geared to nurses with all the technical knowledge (titration, half-life, dosages, etc.). Our students really did not need that type of information and the faculty could not add any more material to their existing courses. Our department developed an exercise pharm course that address the exercise biology programs needs.

College of Science & Mathematics

Department: Biological Sciences

Major Program: Bachelor of Science (Exercise Biology Option)
Minor Program:
Certificate Program:

Current	Hrs
I. General Education BIO 111, 112, 115 STT 264 and 265 AREA VI EH 205 or PSY 110	40
II. Departmental Core Requirements BIO 111, 112, 115, 210, 212 EXB 194, 260, 321, 352, 353, 354, 355, 401, 450, 451, 466, 482	 20 44
III. Supporting Requirements CHM 121, 122, 123, 211/215, 212/216, 213 or BMB 423 PHY 111/101, 112/102 MTH 130, STT 264, 265 ANT 201, 202, BIO 278, 279, BMB 250 PHR340 or PHR 410 or EXB 261	 31 10 13 21 3-4
IV. Life Science Electives A minimum of 10 credit hours selected from 300- and 400- level courses in the COSM, ANT, BMB, M&I, and/or P&B and Nursing	10
Total	192-193

New	Hrs
I. General Education BIO 111, 112, 115 STT264 and 265 AREA VI (choose one) EH 205, PSY 110, SM 205	40
II. Departmental Core Requirements BIO 111, 112, 115, 210, 212 EXB 194, BIO 101, 260, 352, 353, 354, 450, 451, 452, 455, 466, 482	 20 44
III. Supporting Requirements CHM 121, 122, 123, 211/215, 212/216, 213 or BMB 423 PSY 341 PHY 111/101, 112/102 MTH 130, STT 264, 265 ANT 201, 202, BMB 250, P&B 301, 302	 31 4 10 13 20
IV. Life Science Electives Choose from BIO 305, 399, 408, 441, 488, 499, PHY 113/103, PSY 301, 303, 308, 391, 392 CHM 213/217 or approved elective	5
Total	187

Department Chair_____ _____ _____
Date

College Curriculum Committee Chair_____ _____
Date

College Dean_____ _____
Date

College of Science and Mathematics

Department: Mathematics and Statistics
Undergraduate Program: B.S. Mathematics – Pure Math Concentration

Current	
General Education Requirements	**Hours**
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230 **Area II**: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200 **Area III**: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200 **Area IV**: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214 **Two Additional Courses**: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement. **Area V**: Natural Sciences *At least one must be WI* PHY 240 & PHY 200 PHY 242 & PHY 202 PHY 244 & PHY 204 **Area VI**: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200 or PSY 110	66 Hrs.

New	
General Education Requirements	Hours
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230 **Area II**: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200 **Area III**: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200 **Area IV**: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214 **Two Additional Courses**: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement. **Area V**: Natural Sciences *At least one must be WI* PHY 240 & PHY 200 PHY 242 & PHY 202 PHY 244 & PHY 204 **Area VI**: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200, PSY 110, or **SM 205**	66 Hrs.

* *Please Note*: The only requested change to this degree program is the addition of SM 205 to GE Area VI, as an additional course option that would fulfill the college component requirement.

Current	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 233 Differential Equations MTH 255 Linear Algebra MTH 280 Intro to Math. Proof (WI) MTH 355 Advanced Linear Algebra MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 492 Math Seminar (WI)	42 Hrs
II. Departmental Electives (*Choose 21 Hours*) MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Differential Equations MTH 381 Number Theory MTH 407 Optimization Techniques MTH 410 Theoretical Fnds of Computing MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Security MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 471 Geometry MTH 480 Appl Math:Geometric Mthds MTH 481 Appl Math:Differential Eqs MTH 482 Appl Math:Integral Methods STT 360 Applied Statistics I STT 361 Applied Statistics II STT 461 Theory of Statistics I STT 462 Theory of Statistics II	21 Hrs
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science I	8 Hrs.
IV. General Electives	46 Hrs.
Total Hours	183 Hrs.

New	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 233 Differential Equations MTH 255 Linear Algebra MTH 280 Intro to Math. Proof (WI) MTH 355 Advanced Linear Algebra MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 492 Math Seminar (WI)	42 Hrs.
II. Departmental Electives *(Choose 21 Hours*) MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Differential Equations MTH 381 Number Theory MTH 407 Optimization Techniques MTH 410 Theoretical Fnds of Computing MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Security MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 471 Geometry MTH 480 Appl Math:Geometric Mthds MTH 481 Appl Math:Differential Eqs MTH 482 Appl Math:Integral Methods STT 360 Applied Statistics I STT 361 Applied Statistics II STT 461 Theory of Statistics I STT 462 Theory of Statistics II	21 Hrs
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science	8 Hrs
IV. General Electives	46 Hrs.
Total Hours	183 Hrs.

College of Science and Mathematics

Department: Mathematics and Statistics
Undergraduate Program: B. S. Mathematics – Applied Math Concentration

Current	
General Education Requirements	**Hours**
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230	66 Hrs.
Area II: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200	
Area III: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200	
Area IV: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214	
Two Additional Courses: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement.	
Area V: Natural Sciences *At least one must be WI* PHY 240 & PHY 200 PHY 242 & PHY 202 PHY 244 & PHY 204	
Area VI: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200 or PSY 110	

New	
General Education Requirements	Hours
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230	66 Hrs.
Area II: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RST 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200	
Area III: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200	
Area IV: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214	
Two Additional Courses: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement.	
Area V: Natural Sciences *At least one must be WI* PHY 240 & PHY 200 PHY 242 & PHY 202 PHY 244 & PHY 204	
Area VI: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200, PSY 110 or **SM 205**	

* *Please Note*: The only requested change to this degree program is the addition of SM 205 to GE Area VI, as an additional course option that would fulfill the college component requirement.

Current	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 233 Differential Equations MTH 255 Linear Algebra MTH 280 Intro to Math. Proof (WI) MTH 355 Advanced Linear Algebra MTH 431 Real Variables I MTH 432 Real Variables II MTH 492 Math Seminar (WI) *Choose at least four courses from the following:* MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Differential Equations MTH 360 Applied Statistics I MTH 361 Applied Statistics II *Choose at least two from the following:* MTH 407 Optimization Techniques MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Security MTH 456 Coding Theory MTH 458 Applied Graph Theory MTH 480 Appl Math:Geometric Mthds MTH 481 Appl Math:Geometric Mthds MTH 482Appl Math:Integral Methods *Two additional 400-level courses from the following courses or from above:* MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 457 Combinatorics STT 461 Theory of Statistics I STT 462 Theory of Statistics II	57-61 Hrs
II. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science I *Choose one sequence*: PHY 371 Analytical Mechanics I & PHY 372 Analytical Mechanics I; OR ME 212 Statics ME 213 Dynamics At least 12 hours of advanced technical electives, approved by advisor.	26-28 Hrs.
General Electives:	28-34 Hrs.
Total Hours	183 Hrs.

New	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 233 Differential Equations MTH 255 Linear Algebra MTH 280 Intro to Math. Proof (WI) MTH 355 Advanced Linear Algebra MTH 431 Real Variables I MTH 432 Real Variables II MTH 492 Math Seminar (WI) *Choose at least four courses from the following:* MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Differential Equations MTH 360 Applied Statistics I MTH 361 Applied Statistics II *Choose at least two from the following:* MTH 407 Optimization Techniques MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Security MTH 456 Coding Theory MTH 458 Applied Graph Theory MTH 480 Appl Math:Geometric Mthds MTH 481 Appl Math:Geometric Mthds MTH 482Appl Math:Integral Methods *Two additional 400-level courses from the following courses or from above:* MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 457 Combinatorics STT 461 Theory of Statistics I STT 462 Theory of Statistics II	57-61 Hrs.
II. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science *Choose one sequence*: PHY 371 Analytical Mechanics I & PHY 372 Analytical Mechanics I; OR ME 212 Statics ME 213 Dynamics At least 12 hours of advanced technical electives, approved by advisor.	26-28 Hrs
General Electives:	28-34 Hrs.
Total Hours	183 Hrs.

College of Science and Mathematics

Department: Mathematics and Statistics
Undergraduate Program: B.S. Mathematics – Statistics Concentration

Current	
General Education Requirements	**Hours**
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230	62-66 Hrs.
Area II: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200	
Area III: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200	
Area IV: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214	
Two Additional Courses: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement.	
Area V: Natural Sciences *Choose Three: (At least one must be WI)* BIO 105, 106, 107 CHM 105, 106, 107 GL 105, 106, 107 PHY 240/200, 242/202, 244/204	
Area VI: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200 or PSY 110	

New	
General Education Requirements	Hours
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230	62-66 Hrs.
Area II: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200	
Area III: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200	
Area IV: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214	
Two Additional Courses: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement.	
Area V: Natural Sciences *Choose Three: (At least one must be WI)* BIO 105, 106, 107 CHM 105, 106, 107 GL 105, 106, 107 PHY 240/200, 242/202, 244/204	
Area VI: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200, PSY 110, or **SM 205**	

* *Please Note*: The only requested change to this degree program is the addition of SM 205 to GE Area VI, as an additional course option that would fulfill the college component requirement.

Current	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 255 Linear Algebra MTH 280 Intro to Math. Proof (WI) MTH 355 Advanced Linear Algebra STT 360 Applied Statistics I STT 361 Applied Statistics II STT 461 Theory of Statistics I STT 462 Theory of Statistics II STT 466 Statistical Methods I STT 467 Statistical Methods II STT 492 Statistics Seminar (WI)	46 Hrs
II. Departmental Electives *(Choose 15 Hours*) STT 401 Nonparametric Methods STT 411 Applied Time Series STT 424 Statistical Control Methods STT 426 Reliability and Life Data STT 428 Queuing Theory STT 464 Computational Statistics STT 469 Experimental Design MTH 233 Differential Equations MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Differential Equations MTH 381 Number Theory MTH 407 Optimization Techniques MTH 410 Theoretical Fnds of Computing MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Security MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 471 Geometry MTH 476 Computer Graphics I MTH 477 Computer Graphics II MTH 480 Appl Math:Geometric Mthds MTH 481 Appl Math:Differential Eqs MTH 482 Appl Math:Integral Methods CS 470 Systems Simulation	15 Hrs
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science I *Cognate Area – select at least 16 hours in any area in which statistics may be applied, with advisor's approval*	24 Hrs.
IV. General Electives	32-36 Hrs.
Total Hours	183 hrs.

New	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 255 Linear Algebra MTH 280 Intro to Math. Proof (WI) MTH 355 Advanced Linear Algebra STT Applied Statistics I STT 361 Applied Statistics II STT 461 Theory of Statistics I STT 462 Theory of Statistics II STT 466 Statistical Methods I STT 467 Statistical Methods II STT 492 Statistics Seminar (WI)	46 Hrs.
II. Departmental Electives *(Choose 15 Hours)* STT 401 Nonparametric Methods STT 411 Applied Time Series STT 424 Statistical Control Methods STT 426 Reliability and Life Data STT 428 Queuing Theory STT 464 Computational Statistics STT 469 Experimental Design MTH 233 Differential Equations MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Differential Equations MTH 381 Number Theory MTH 407 Optimization Techniques MTH 410 Theoretical Fnds of Computing MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Security MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 471 Geometry MTH 476 Computer Graphics I MTH 477 Computer Graphics II MTH 480 Appl Math:Geometric Mthds MTH 481 Appl Math:Differential Eqs MTH 482 Appl Math:Integral Methods CS 470 Systems Simulation	15 Hrs
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science *Cognate Area – select at least 16 hours in any area in which statistics may be applied, with advisor's approval*	24 Hrs
IV. General Electives	32-36 Hrs.
Total Hours	183 hrs.

College of Science and Mathematics

Department: Mathematics and Statistics
Undergraduate Program: B.A. Mathematics

Current	
General Education Requirements	**Hours**
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230 **Area II**: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200 **Area III**: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200 **Area IV**: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214 **Two Additional Courses**: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement. **Area V**: Natural Sciences *Choose Three: (At least one must be WI)* BIO 105, 106, 107 CHM 105, 106, 107 GL 105, 106, 107 PHY 240/200, 242/202, 244/204 **Area VI**: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200 or PSY 110	62-66 Hrs.

New	
General Education Requirements	Hours
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230 **Area II**: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200 **Area III**: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200 **Area IV**: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214 **Two Additional Courses**: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement. **Area V**: Natural Sciences *Choose Three: (At least one must be WI)* BIO 105, 106, 107 CHM 105, 106, 107 GL 105, 106, 107 PHY 240/200, 242/202, 244/204 **Area VI**: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200, PSY 110, or **SM 205**	62-66 Hrs.

* *Please Note*: The only requested change to this degree program is the addition of SM 205 to GE Area VI, as an additional course option that would fulfill the college component requirement.

Current	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 255 Linear Algebra MTH 280 Intro to Math. Proof (WI) MTH 355 Advanced Linear Algebra MTH 431 Real Variables I MTH 440 History of Mathematics MTH 451 Intro to Modern Algebra I MTH 471 Geometry MTH 492 Math Seminar (WI) STT 360 Applied Statistics I STT 361 Applied Statistics II *Choose one: (Both 3 hours)* MTH 432 Real Variables II MTH 452 Intro to Modern Algebra II	45 Hrs
II. Departmental Electives *Choose 9 hours from the following courses:* MTH 233 Differential Equations MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 332 Complex Variables MTH 333 Partial Diff Equations MTH 381 Number Theory MTH 407 Optimization Techniques MTH 410 Theoretical Found of Comp MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Sec MTH 432 Real Variables II MTH 433 Real Variables III MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 480 Appl Math: Geom Mthds MTH 481 Appl Math: Diff Equations MTH 482 Appl Math: Integral Mthds STT 401 Nonparametric Statistics STT 461 Theory of Statistics I STT 462 Theory of Statistics II STT 466 Statistical Methods I STT 467 Statistical Methods II	9 Hrs
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science I *27 Additional hours in departments belonging to neither COSM nor CECS (at least 8 hrs in one dept).* *And, one additional course within COSM or CECS, but not the Department of Mathematics and Statistics.*	38 Hrs.
IV. General Electives	25-29 Hrs.
Total Hours	183 Hrs.

New	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 255 Linear Algebra MTH 280 Intro to Math. Proof (WI) MTH 355 Advanced Linear Algebra MTH 431 Real Variables I MTH 440 History of Mathematics MTH 451 Intro to Modern Algebra I MTH 471 Geometry MTH 492 Math Seminar (WI) STT 360 Applied Statistics I STT 361 Applied Statistics II *Choose one: (Both 3 hours)* MTH 432 Real Variables II MTH 452 Intro to Modern Algebra II	45 Hrs.
II. Departmental Electives *Choose 9 hours from the following courses:* MTH 233 Differential Equations MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 332 Complex Variables MTH 333 Partial Diff Equations MTH 381 Number Theory MTH 407 Optimization Techniques MTH 410 Theoretical Found of Comp MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Sec MTH 432 Real Variables II MTH 433 Real Variables III MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 480 Appl Math: Geom Mthds MTH 481 Appl Math: Diff Equations MTH 482 Appl Math: Integral Mthds STT 401 Nonparametric Statistics STT 461 Theory of Statistics I STT 462 Theory of Statistics II STT 466 Statistical Methods I STT 467 Statistical Methods II	9 Hrs
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science *27 Additional hours in departments belonging to neither COSM nor CECS (at least 8 hrs in one dept).* *And, one additional course within COSM or CECS, but not the Department of Mathematics and Statistics.*	38 Hrs
IV. General Electives	25-29 Hrs.
Total Hours	183 Hrs.

College of Science and Mathematics

Department: Mathematics and Statistics
Undergraduate Program: Dual Degree, B.A. in Mathematics

Current	
General Education Requirements	**Hours**
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230 **Area II**: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200 **Area III**: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200 **Area IV**: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214 **Two Additional Courses**: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement. **Area V**: Natural Sciences *Choose Three: (At least one must be WI)* BIO 105, 106, 107 CHM 105, 106, 107 GL 105, 106, 107 PHY 240/200, 242/202, 244/204 **Area VI**: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200 or PSY 110	62-66 Hrs.

New	
General Education Requirements	Hours
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230 **Area II**: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200 **Area III**: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200 **Area IV**: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214 **Two Additional Courses**: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement. **Area V**: Natural Sciences *Choose Three: (At least one must be WI)* BIO 105, 106, 107 CHM 105, 106, 107 GL 105, 106, 107 PHY 240/200, 242/202, 244/204 **Area VI**: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200, PSY 110, or **SM 205**	62-66 Hrs.

* *Please Note*: The only requested change to this degree program is the addition of SM 205 to GE Area VI, as an additional course option that would fulfill the college component requirement.

Current	
Departmental Requirements and Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 255 Linear Algebra MTH 355 Advanced Linear Algebra *At least two (2) of the following courses:* MTH 431 Real Variables I MTH 432 Real Variables II MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 457 Combinatorics MTH 458 Applied Graph Theory STT 461 Theory of Statistics I STT 462 Theory of Statistics II	17-19 Hrs.
II. Departmental Electives *Choose additional courses, from the list below, to total 55 credit hours (including MTH 229 and 230):* MTH 232 Calculus IV MTH 233 Differential Equations MTH 280 Into to Mathematical Proof MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 381 Number Theory MTH 410 Theoretical Found of Comp MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Sec MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 440 History of Mathematics MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 471 Geometry MTH 492 Undergraduate Math Seminar (WI) STT 360 Applied Statistics I; **OR** STT 363 Engineering Statistics STT 361 Applied Statistics II STT 461 Theory of Statistics I STT 462 Theory of Statistics II STT 466 Statistical Methods I STT 467 Statistical Methods II	26-28 Hrs.
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science I	8 Hrs.
IV. General Electives	62-70 Hrs.
Total Hours	183 Hrs.

New	
Departmental Requirements and Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 255 Linear Algebra MTH 355 Advanced Linear Algebra *At least two (2) of the following courses:* MTH 431 Real Variables I MTH 432 Real Variables II MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 457 Combinatorics MTH 458 Applied Graph Theory STT 461 Theory of Statistics I STT 462 Theory of Statistics II	17-19 Hrs.
II. Departmental Electives *Choose additional courses, from the list below, to total 55 credit hours (including MTH 229 and 230):* MTH 232 Calculus IV MTH 233 Differential Equations MTH 280 Into to Mathematical Proof MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 381 Number Theory MTH 410 Theoretical Found of Comp MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Sec MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 440 History of Mathematics MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 471 Geometry MTH 492 Undergraduate Math Seminar (WI) STT 360 Applied Statistics I; **OR** STT 363 Engineering Statistics STT 361 Applied Statistics II STT 461 Theory of Statistics I STT 462 Theory of Statistics II STT 466 Statistical Methods I STT 467 Statistical Methods II	26-28 Hrs
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science I	8 Hrs.
IV. General Electives	62-70 Hrs.
Total Hours	183 Hrs.

College of Science and Mathematics

Department: Mathematics and Statistics
Undergraduate Program: Dual Degree, B.S. in Mathematics

Current	
General Education Requirements	**Hours**
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230	62-66 Hrs.
Area II: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200	
Area III: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200	
Area IV: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214	
Two Additional Courses: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement.	
Area V: Natural Sciences *Choose Three: (At least one must be WI)* BIO 105, 106, 107 CHM 105, 106, 107 GL 105, 106, 107 PHY 240/200, 242/202, 244/204	
Area VI: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200 or PSY 110	

New	
General Education Requirements	Hours
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 ENG 102 *Mathematical Skills*: MTH 229 MTH 230	62-66 Hrs.
Area II: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200	
Area III: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200	
Area IV: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214	
Two Additional Courses: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement.	
Area V: Natural Sciences *Choose Three: (At least one must be WI)* BIO 105, 106, 107 CHM 105, 106, 107 GL 105, 106, 107 PHY 240/200, 242/202, 244/204	
Area VI: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200, PSY 110, or **SM 205**	

* *Please Note*: The only requested change to this degree program is the addition of SM 205 to GE Area VI, as an additional course option that would fulfill the college component requirement.

Current	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 255 Linear Algebra MTH 355 Advanced Linear Algebra *At least two (2) of the following courses:* MTH 431 Real Variables I MTH 432 Real Variables II MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 480 Appl Math: Geometric Methods MTH 481 Appl Math: Differential Equations MTH 482 Appl Math: Integral Methods STT 461 Theory of Statistics I STT 462 Theory of Statistics II	22-24 Hrs
II. Departmental Electives *Choose additional courses, from the list below, to total 55 credit hours (including MTH 229 and 230):* MTH 233 Differential Equations MTH 280 Into to Mathematical Proof MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Differential Equations MTH 381 Number Theory MTH 407 Optimization Techniques MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Sec MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 480 Appl Math: Geometric Methods MTH 481 Appl Math: Differential Equations MTH 482 Appl Math: Integral Methods MTH 492 Undergraduate Math Seminar (WI) STT 360 Applied Statistics I; **OR** STT 363 Engineering Statistics STT 361 Applied Statistics II STT 461 Theory of Statistics I STT 462 Theory of Statistics II STT 466 Statistical Methods I STT 467 Statistical Methods II	21-23 Hrs
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science I	8 Hrs.
IV. General Electives	62-70 Hrs.
Total Hours	183 Hrs.

New	
Departmental Requirements & Electives	**Hours**
I. Required Courses MTH 231 Calculus III MTH 232 Calculus IV MTH 255 Linear Algebra MTH 355 Advanced Linear Algebra *At least two (2) of the following courses:* MTH 431 Real Variables I MTH 432 Real Variables II MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 480 Appl Math: Geometric Methods MTH 481 Appl Math: Differential Equations MTH 482 Appl Math: Integral Methods STT 461 Theory of Statistics I STT 462 Theory of Statistics II	32-34 Hrs.
II. Departmental Electives *Choose additional courses, from the list below, to total 55 credit hours (including MTH 229 and 230):* MTH 233 Differential Equations MTH 280 Into to Mathematical Proof MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Differential Equations MTH 381 Number Theory MTH 407 Optimization Techniques MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Sec MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 480 Appl Math: Geometric Methods MTH 481 Appl Math: Differential Equations MTH 482 Appl Math: Integral Methods MTH 492 Undergraduate Math Seminar (WI) STT 360 Applied Statistics I; **OR** STT 363 Engineering Statistics STT 361 Applied Statistics II STT 461 Theory of Statistics I STT 462 Theory of Statistics II STT 466 Statistical Methods I STT 467 Statistical Methods II	21-23 Hrs
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science I	8 Hrs.
IV. General Electives	62-70 Hrs.
Total Hours	183 Hrs.

Mathematics and Statistics
Wright State University
Dayton, OH 45435-0001
937-775-2785
dan.voss@wright.edu

Date: October 6, 2005

To: Jean Edwards, Chair, CoSM Undergraduate Curriculum Committee

Copy: Joyce Howes

From: Dan Voss, Chair, Mathematics and Statistics

Re: Changes in mathematics and statistics minor programs

The Mathematics and Statistics faculty have approved changes in the Mathematics Minor program and also in the Statistics Minor program. The current and new programs are documented for the mathematics minor on page 2 and for the statistics minor on page 3 of this document. In a nutshell, the changes are merely as follows.

For the mathematics minor, only one of MTH 233 and MTH 235 can count.

For the statistics minor, STT 430 cannot count.

In both cases, the rationale is simply to prevent undue redundancy.

Please have these changes in our minor programs considered by the college curriculum committee.

Thanks!

College of Science and Mathematics

Department: Mathematics and Statistics
Undergraduate Program: Minor in Mathematics

Current	
	Hours
I. Required Courses MTH 229 Calculus I MTH 230 Calculus II MTH 231 Calculus III MTH 253 Matrix Algebra; or MTH 255 Linear Algebra	18 Hrs
II. Departmental Electives *Choose at least 12 hours from the following courses:* MTH 232 Calculus IV MTH 233 Differential Equations MTH 257 Discrete Math for Computing MTH 280 Intro to Mathematical Proof MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Diff Equations MTH 355 Advanced Linear Algebra MTH 381 Number Theory MTH 407 Optimization Techniques MTH 410 Theoretical Found of Comp MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Sec MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 471 Geometry MTH 480 Appl Math: Geom Mthds MTH 481 Appl Math: Diff Equations MTH 482 Appl Math: Integral Mthds STT 360 Applied Statistics I; OR STT 363 Engineering Statistics STT 461 Theory of Statistics I	12 Hrs
➢ Only one of MTH 253 and MTH 255 and only one of STT 360 and 363 can count towards the minor. ➢ Courses cross referenced with the student's major department cannot be included in the minor. ➢ A GPA of at least a 2.0 must be maintained in all minor courses. ➢ The minor must include at least three (3) 300 or 400 level courses	

New	
	Hours
I. Required Courses MTH 229 Calculus I MTH 230 Calculus II MTH 231 Calculus III MTH 253 Matrix Algebra; or MTH 255 Linear Algebra	18 Hrs.
II. Departmental Electives *Choose at least 12 hours from the following courses:* MTH 232 Calculus IV **MTH 233 Differential Equations; OR** **MTH 235 Differential Equations with Matrices** MTH 257 Discrete Math for Computing MTH 280 Intro to Mathematical Proof MTH 306 Mathematical Modeling MTH 314 Introduction to Mathematical Software MTH 316 Numerical Methods I MTH 317 Numerical Methods II MTH 332 Complex Variables MTH 333 Partial Diff Equations MTH 355 Advanced Linear Algebra MTH 381 Number Theory MTH 407 Optimization Techniques MTH 410 Theoretical Found of Comp MTH 415 Introduction to Scientific Computation MTH 419 Cryptography & Data Sec MTH 431 Real Variables I MTH 432 Real Variables II MTH 433 Real Variables III MTH 451 Intro to Modern Algebra I MTH 452 Intro to Modern Algebra II MTH 456 Coding Theory MTH 457 Combinatorics MTH 458 Applied Graph Theory MTH 471 Geometry MTH 480 Appl Math: Geom Mthds MTH 481 Appl Math: Diff Equations MTH 482 Appl Math: Integral Mthds STT 360 Applied Statistics I; OR STT 363 Engineering Statistics STT 461 Theory of Statistics I	12 Hrs
➢ Only one of MTH 233 and MTH 235, only one of MTH 253 and MTH 255, and only one of STT 360 and 363 can count towards the minor. ➢ Courses cross referenced with the student's major department cannot be included in the minor. ➢ A GPA of at least a 2.0 must be maintained in all minor courses. ➢ The minor must include at least three (3) 300 or 400 level courses	

Note: The change will be implemented upon approval, since it only expands electives available to students.

College of Science and Mathematics

Department: Mathematics and Statistics
Undergraduate Program: Minor in Statistics

Current	
	Hours
I. Required Courses MTH 229 Calculus I MTH 230 Calculus II MTH 253 Matrix Algebra; OR MTH 255 Linear Algebra STT 360 Applied Statistics I STT 361 Applied Statistics II	21 Hrs
II. Departmental Electives *Choose at least 9 hours from the following courses:* STT courses numbered above 367	9 Hrs

New	
	Hours
I. Required Courses MTH 229 Calculus I MTH 230 Calculus II MTH 253 Matrix Algebra; OR MTH 255 Linear Algebra STT 360 Applied Statistics I STT 361 Applied Statistics II	21 Hrs.
II. Departmental Electives *Choose at least 9 hours from the following courses:* STT courses numbered above 367 **(Except STT 430)**	9 Hrs

- Elective courses must be approved in advance by the Department of Mathematics and Statistics
- Only one of MTH 253 and MTH 255 can count towards the minor.
- Courses cross referenced with the student's major department cannot be included in the minor.
- A GPA of at least 2.0 must be maintained in all minor courses.
- A GPA of at least 2.0 must be maintained in all minor courses at the 300 or 400 level.
- Students who are majoring in mathematics (but not pursuing a statistics concentration) may also earn a statistics minor, but departmental elective hours may not count towards both the major and the minor.

Note: The change will be implemented upon approval, but it will not apply to students already admitted to the statistics minor program if they take and pass STT 430 by spring quarter 2006.

WRIGHT STATE UNIVERSITY

Mathematics and Statistics
Wright State University
Dayton, OH 45435-0001
937-775-2785

Date: April 29, 2005

To: Jean Edwards, Chair, Undergraduate Curriculum Committee, CoSM

From: Dan Voss, Chair, Mathematics and Statistics

Re: Proposal to rename an existing program as Bachelor of Science in Statistics

Wright State University has offered a Statistics Concentration as a track within our Mathematics Bachelor of Science degree program for more than 30 years. We would like to make this program more prominent by giving it a separate designation, and so to award a Bachelor of Science in Statistics degree. A motion to rename the existing Statistics Concentration of the Mathematics BS program to be Bachelor of Science in Statistics was unanimously approved by the Department of Mathematics and Statistics faculty in March, and we are hereby forwarding the proposal to you for consideration by the college Undergraduate Curriculum Committee.

Attached is a Preliminary Prospectus, as required by Ohio Board of Regents Rule 3333-1-05, including program information and our rationale for the proposal. Dr. Jane Fullerton, the OBR Associate Vice Chancellor responsible for public baccalaureate degree review, kindly met with me in February to discuss our proposal and a prior draft of the Preliminary Prospectus. The attached Preliminary Prospectus has been embellished based on her advice, and we are optimistic that it is sufficient for consideration by the Ohio Board of Regents. It is also my understanding that my meeting and communications with Dr. Fullerton served as the required notification of OBR of our intent to submit this proposal. I am grateful to Dr. Lillie Howard, Vice President for Curriculum and Instruction, for arranging my meeting with Dr. Fullerton, to Dr. Fullerton for taking the time to meet and provide her guidance, as this was most helpful, and to Dr. Tom Sav, Chair of UCAPC, for his advice concerning the process and necessary documentation.

The increased visibility of a Bachelor of Science in Statistics program is timely in view of increased enrollments in advanced placement statistics courses at the high school level (as indicated in the Preliminary Prospectus), given that we also offer a Master of Science in Applied Statistics program at Wright State University. We hope that this proposal will be favorable received, and I welcome the opportunity to provide further information upon request.

The Preliminary Prospectus provides further motivation for the proposal. The purpose of meeting with you today is to clarify the process we are to follow to pursue approval of the new designation. We appreciate your guidance in this regards. Thanks!

PRELIMINARY PROSPECTUS

A. *Indicate the title of the proposed program and indicate whether it is a new degree, a new degree program, or the modification of an existing program.*

Title: Bachelor of Science in Statistics

This would be modification of the BS Mathematics Major/Statistics concentration. The only modification is to change the name from Mathematics Major/Statistics Concentration to simply Statistics Major.

B. *State the rationale for initiating this action.*

The rationale for changing the name of the Statistics Concentration to a Statistics Major is outlined in the following points:

- Recently the Board of Directors of the American Statistical Association (ASA) approved a set of curriculum guidelines for undergraduate degrees in Statistical Science. Details on these guidelines appear in Bryce et al (2001). At Wright State University, the curriculum for the B.S. degree in Mathematics with a Statistics Concentration is consistent with the curriculum for a Statistics Major as outlined by the ASA guidelines. Therefore, it seems both reasonable and appropriate to rename our Statistics Concentration as a Statistics Major.
- If students studying statistics at Wright State want to be identified as statisticians upon graduating, it makes sense to offer them a degree in Statistics as opposed to a degree in Mathematics.
- Currently prospective students who want to study statistics will not find a Statistics Major in our undergraduate catalog. Demand continues to grow for graduates with quantitative reasoning and data analysis skills. Exposure to statistics continues to increase in high schools due to growing numbers of students taking the advanced placement exam in statistics (from 7,667 students in 1997 to 65,878 students in 2004*). Thus, the visibility of a degree in Statistics at Wright State University needs to be elevated. Changing the name Statistics Concentration in Mathematics to Statistics Major will help make the study of statistics more visible at Wright State University by setting it apart as a distinct major.
- The department has offered a Master of Science in Applied Statistics since 1989, building upon a program that program existed as a statistics option within the Master of Science in Mathematics degree program since 1981. Designation of that program as one in Applied Statistics rather than Mathematics enhanced the visibility of that program. The faculty is already in place to support the undergraduate and graduate programs. The proposed designation will similarly enhance the visibility of the undergraduate program, helping to attract more students who take advance placement statistics courses in high school, and serve as an effective feeder to our existing graduate program.
- A good source of students over the years for our graduate program in statistics has been Procter & Gamble. In recent years we offered many of our graduate statistics courses for P&G students in Mason, Ohio via video-conferencing. The Ph.D. statistician at P&G who orchestrated this arrangement with us indicated the desirability from her perspective to hire bachelor's level statisticians, allowing them to gain experience on the job prior to their

pursuing graduate education. This provided further motivation to offer an undergraduate program designated as being in statistics.

C. *Provide information regarding the relationship of the proposed program action to the overall mission of the institution. Indicate whether the program is part of an ongoing traditional mission, or related to current strategies -for modifying or redirecting institutional objectives.*

In one sense, this proposal is part of the ongoing traditional mission of Wright State University because it involves only a name change from the current Statistics Concentration in Mathematics to "Statistics Major". However, as Wright State University continues to evolve in response to increasing demand for a quantitatively trained workforce, our curriculum needs to evolve as well. This proposal is a simple step in that direction.

D. *Indicate the proposed implementation date for this action.*

Fall 2006.

E. *Indicate the department(s) or other organizational unit(s) responsible for this program.*

The Department of Mathematics and Statistics only.

F. *Describe the program in catalog style, including each concentration or option. (if this program is a modification of an existing program, indicate the specific changes.)*

The requested program description is attached. This is a name change modification only to create a Statistics Major from the current Mathematics Major with a Statistics Concentration. We are not proposing any other modification of the Statistics Concentration.

(see attached program description)

G. *Provide details regarding the source of students. Provide estimates of the numbers of students (FTE) expected to enroll in the proposed program over the next four year period. Indicate whether these will be current students or new students, and how many are estimated to be full-time and/or part-time.*

Wright State University is the university-of-choice for many local high school graduates. Increased visibility of the undergraduate statistics program will help us attract more of these local graduates into the program. In the last 20 years, 51 students (2.5 students per year) earned the B.S. in Mathematics degree with the Statistics Concentration option, this with limited effort to recruit students for the program. With our planned and coordinated effort, it is reasonably expected that three to five students per year (or 4 students on the average) or more will graduate with the degree.

H. *Indicate the availability of other such programs within a fifty-mile radius.*

Miami University has a B.S. degree in Statistics.

I. *Describe the impact this proposed program will have on facilities, faculty, and support services.*

Since our proposal is a name change only, we do not anticipate any impact on facilities, faculty, and support services.

J. *Estimate total costs, over and above current levels of operation, associated with this proposed program during the next four years.*

There are no costs anticipated this proposal except perhaps some incidental costs associated with changing the name in official listings of major programs at Wright State University.

* http://apcentral.collegeboard.com/repository/programsummaryreport_39028.pdf

References:

Bryce, G. R., Gould, R., Notz, W. I., and Peck, R. L. (2001), "Curriculum Guidelines for Bachelor of Science Degrees in Statistical Science," *The American Statistician*, **55**, 7.

Program description in catalog style for the proposed
Bachelor of Science in Statistics

College of Science and Mathematics

Department: Mathematics and Statistics

Professors
Arasu, Dombrowski, Evans, Khamis[1], Mann[1] (Emeritus), McKee (Associate Dean), Miller, Park[1] (Emeritus) Pedersen, Perkel, Ratnaparki[1], Rutter (Emeritus), Seoh[1], Svobodny, Turyn, Voss[1] (Chair)

Associate Professors
Farrell, Ho, C. Huang, Q. Huang, Kaplan, Kinateder[1], Loi, Mathews, Meike (Emeritus), Mercer, Tarpey[1], Vance, Wang[1]

Assistant Professors
Chen, Craighead, Reed, Slilaty, Sun[1], Tian

Lecturers
Brackenridge, Dahl, Diesslin, Douglas, Lester, Otto

Instructors
Buschor[1], Wellinghoff[1], Zizzo

Statistics Program

The Bachelor of Science program is adaptable to many postgraduate goals, ranging from various scientific or professional careers in industry, academia or government to graduate school.

Students must have at least a 2.5 GPA in MTH 229 or 230 (or equivalent courses) with a "C" or better in both courses to be accepted in the Department of Mathematics and Statistics.

To earn a Bachelor of Science in Statistics, students must complete the major program described below. The program includes General Education requirements, departmental requirements, related course requirements, and general electives. The departmental component consists of required courses and electives in mathematics and statistics. Students must achieve at least a 2.0 GPA in the courses numbered 300 or higher used to satisfy this component. The related course requirements include a cognate area, consisting of an appropriate collection of courses in an area to which statistics can be applied, reflecting the interdisciplinary nature of statistics. The general electives may be taken outside the Department of Mathematics and Statistics.

Each statistics major is assigned an advisor from the department statistics faculty. As early as possible in their college career, students should consult with their advisor to discuss their career plans, the important choice of a cognate area, and to discuss which courses to take and when to take them. Advising materials are available in the department office to help majors in these choices. However, there is no substitute for regular, in-person consultation with the faculty advisor. Moreover, the advisor must approve all courses intended to satisfy program requirements.

[1] Statistics faculty

Program description in catalog style for the proposed
Bachelor of Science in Statistics

Bachelor of Science in Statistics

Proposed Program This proposed program is identical to the existing program for a B.S. in Mathematics with a Statistics Concentration, including any proposed modifications under review for that program. (Proposed modifications under review are: add SM 205 to GE Area VI)	
	Hours
General Education Program Requirements	62-66 Hrs
Area I: Communication and Mathematical Skills *Communication Skills*: ENG 101 & ENG 102 *Mathematical Skills*: MTH 229 Calculus I MTH 230 Calculus II **Area II**: Cultural-Social Foundations *Choose One*: CLS 150, HST 101, HST 102 or HST 103 *Choose One*: *(all WI courses)* CSE 250, CST 221, CST 231, CST 232, CST 241, CST 242, CST 243, CST 251, RSE 260, RST 261, RST 262, RST 271, RST 281, RST 291, or URS 200 **Area III**: Human Behavior *Select 2 courses from different categories:* EC: EC 200, EC 290 PLS: PLS 200 PSY: PSY 105 SOC/WMS: SOC 200 or WMS 200 **Area IV**: Human Expression *Choose One*: Great Books: CLS 204, ENG 204, PHL 204, REL 204 Fine & Performing Arts: ART 214, MP 131, MUS 214, MUS 290 or TH 214 **Two Additional Courses**: Select two additional courses from Area II, III and IV; one course from two of these three areas. Except for Area II, the course selected must come from a different subcategory than the course(s) chosen to meet the area requirement. **Area V**: Natural Sciences *Choose Three: (At least one must be WI)* BIO 105, 106, 107 CHM 105, 106, 107 GL 105, 106, 107 PHY 240/200, 242/202, 244/204 **Area VI**: College Component *Choose One*: AFS 200, ATH 241, ATH 242, ED 210, EH 205, FIN 205, HST 220, HST 221, PHL 200, PSY 110, or SM 205	

Program description in catalog style for the proposed
Bachelor of Science in Statistics

Departmental and Elective Course Requirements		**Hours**
I. Required Courses		46 Hrs
MTH 231 Calculus III	STT 361 Applied Statistics II	
MTH 232 Calculus IV	STT 461 Theory of Statistics I	
MTH 255 Linear Algebra	STT 462 Theory of Statistics II	
MTH 280 Intro. to Math. Proof (WI)	STT 466 Statistical Methods I	
MTH 355 Advanced Linear Algebra	STT 467 Statistical Methods II	
STT 360 Applied Statistics I	STT 492 Statistics Seminar (WI)	
II. Departmental Electives *(Choose 15 Hours:* Must include at least two 400 level courses, at least one must be a STT course)		15 Hrs
STT courses numbered above 367 (to include):		
STT 401 Nonparametric Methods	STT 428 Queuing Theory	
STT 411 Applied Time Series	STT 464 Computational Statistics	
STT 424 Statistical Quality Control	STT 469 Experimental Design	
STT 426 Survival Analysis		
MTH or CS courses from the following:		
MTH 233 Differential Equations	MTH 433 Real Variables III	
MTH 306 Mathematical Modeling	MTH 451 Intro to Modern Algebra I	
MTH 314 Intro. Mathematical Software	MTH 452 Intro to Modern Algebra II	
MTH 316 Numerical Methods I	MTH 456 Coding Theory	
MTH 317 Numerical Methods II	MTH 457 Combinatorics	
MTH 332 Complex Variables	MTH 458 Applied Graph Theory	
MTH 333 Partial Differential Equations	MTH 471 Geometry	
MTH 381 Number Theory	MTH 476 Computer Graphics I	
MTH 407 Optimization Techniques	MTH 477 Computer Graphics II	
MTH 410 Theoretical Fnds of Computing	MTH 480 Appl Math:Geometric Mthds	
MTH 415 Intro. to Scientific Computation	MTH 481 Appl Math:Differential Eqs	
MTH 419 Cryptography & Data Security	MTH 482 Appl Math:Integral Methods	
MTH 431 Real Variables I	CS 470 Systems Simulation	
MTH 432 Real Variables II		
III. Related Course Requirements CS 141 Programming I CS 142 Programming II; or CS 240 Computer Science I; or equivalent *Cognate Area:* at least 16 hours chosen with the approval of a statistics faculty advisor, in any area in which statistical techniques can be applied, with at least 9 of the 16 hours at the 300-level or above.		24 Hrs.
Electives		32-36 Hrs.
Total		**183 Hrs.**

Effective Implementation of Course Modifications

Approved modifications to existing courses will be implemented in the quarter for which they are requested unless registration for that quarter is either completed or in progress. Otherwise, they will be implemented the following quarter.

Approved: University Curriculum and Academic Policy Committee, January 11, 2006.
Approved: Faculty Senate, February 6, 2006.
Approved: Provost, February 10, 2006.